



## Key Performance Features:

- High Energy Neodymium Magnets
- Operating Speeds to 6,000 RPM
- High Torque to Size Ratio
- 24-400 VDC Typical Bus Voltage
- CE Certificate Available

# BFA42/BA42

BRUSHLESS SERVO MOTOR SERIES

## Motor Characteristics (8 pole design)

FRAME SIZE	STACK LENGTH	PEAK STALL TORQUE (T <sub>s</sub> ) OZ-IN	CONT. STALL TORQUE (T <sub>c</sub> ) OZ-IN	FRICTION TORQUE (T <sub>f</sub> ) OZ-IN	ROTOR INERTIA (J <sub>m</sub> ) OZ-IN-SEC <sup>2</sup>	THERMAL RESISTANCE (RM) °C/WATT	MAX RECOMMEND SPEED RPM	MAX WINDING TEMP. C°	ELEC. TIME CONSTANT MSEC	POWER RANGE W	WEIGHT LB
BFA42	-- 200	1950	650	22.0	0.041	0.35	6000	155	5.4	1200	9.7
BFA42	-- 300	2700	900	31.0	0.062	0.31	6000	155	5.5	1700	12.8
BFA42	-- 400	3600	1200	40.0	0.082	0.28	6000	155	5.6	2000	16
BFA42	-- 600	4800	1600	60	0.124	0.20	6000	155	5.65	2800	24.2

BFA42-500 & -700 ARE ALSO AVAILABLE. CONSULT MAGMOTOR FOR SIZES NOT LISTED OR FRACTIONAL SIZES

## Sample Windings

CONSULT MAGMOTOR APPLICATION STAFF FOR OTHER AVAILABLE WINDINGS

	BFA42 -- 200				BFA42 -- 300				BFA42 -- 400				BFA42 -- 600			
	5E	5G	5I	5K	5E	5G	5I	5K	5E	5G	5I	5K	5E	5G	5I	5K
<b>Torque Constant (Kt)</b> oz-in/amp	9.9	15.7	24.9	39.5	14.8	23.5	37.3	59.2	19.7	31.3	49.8	79	29.6	47	74.6	118.5
<b>Voltage Constant (Ke)</b> Volts/Krpm	7.3	11.6	18.4	29.2	10.9	17.4	27.6	43.8	14.6	23.2	36.8	58.4	21.9	34.8	55.2	87.6
<b>L-L Resistance (Rt)</b> Ohms (cold)	0.02	0.046	0.14	0.33	0.035	0.071	0.165	0.4	0.045	0.095	0.22	0.57	0.15	0.21	0.46	0.88
<b>Inductance (L-L)</b> mH	0.08	0.19	0.47	1.18	0.114	0.29	0.71	1.77	0.152	0.39	0.95	2.37	0.23	0.59	1.43	3.6
<b>Peak Current (A)</b> Amps	195	125	78	49	182	114	72	45	183	115	72	45	162	102	64	40

VALUES AS LISTED ARE TEST CONDITIONS, ACTUAL RESULTS MAY VARY

## ▼ BFA42 Series Options

- Optical Encoders
- Hall Sensor or Encoder Commutation
- Gear Boxes and Brakes
- Application Specific Windings and Mechanical designs
- Custom Cables and Connectors
- 8-Pole Design Available
- IP 65 Sealing
- For more options, see [magmotor.com](http://magmotor.com) custom solutions, or call us.

## ▼ Typical Applications

- Semiconductor Equipment
- Medical Equipment
- Automated Assembly Machines
- Laboratory Equipment
- Pharmaceutical Equipment
- X-Y-Z Positioning Machines
- Drive Motor for Small Electric Vehicle

**Magmotor**<sup>™</sup>  
AUS Hybrid Company

